

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant :	Mullins <i>et al.</i>	Art Unit :	1648
Serial No. :	10/780,507	Examiner :	Bo Peng
Filed :	February 17, 2004	Conf. No. :	7871
Title :	ANCESTRAL AND COT VIRAL SEQUENCES, PROTEINS AND IMMUNOGENIC COMPOSITIONS		

**MAIL STOP AMENDMENT**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**INFORMATION DISCLOSURE STATEMENT**

Applicants request consideration of the references listed on the attached PTO-1449 form.

This statement is being filed before the receipt of a first Office Action on the merits.

No fee is believed due. However, please apply any charges or credits to Deposit Account No. 06-1050, referencing Attorney Docket No. 08987-023001.

Respectfully submitted,

Date: \_\_\_\_\_

Jan. 5, 2007

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Substitute Form PTO-1449 (Modified)	U.S. Department of Commerce Patent and Trademark Office	Attorney's Docket No. 08987-023001	Application No. 10/780,507
<b>Information Disclosure Statement by Applicant</b> (Use several sheets if necessary)		Applicant Mullins <i>et al.</i>	
		Filing Date February 17, 2004	
(37 CFR §1.98(b))		Group Art Unit 1648	

### Foreign Patent Documents or Published Foreign Patent Applications

Examiner Initial	Desig. ID	Document Number	Publication Date	Country or Patent Office	Class	Subclass	Translation
	AA	WO 01/60838	08/23/2001	WIPO			Yes No
	AB	WO 00/29561	05/25/2000	WIPO			

### Other Documents (include Author, Title, Date, and Place of Publication)

Examiner Initial	Desig. ID	Document
	BA	Ahlers <i>et al.</i> , "Enhanced immunogenicity of HIV-1 vaccine construct by modification of the native peptide sequence," <i>Proc. Natl. Acad. Sci. USA</i> 94:10856-10861 (1997)
	BB	Akaike, "A New Look at the Statistical Model Identification," <i>IEEE Trans. Autom. Contr.</i> 19:716-723 (1974)
	BC	Altschul <i>et al.</i> , "Basic local alignment search tool," <i>J. Mol. Biol.</i> 215:403-410 (1990)
	BD	Anderson, "Human gene therapy," <i>Nature</i> 392(Suppl):25-30 (1998)
	BE	Anderson, "Testing the Hypothesis of a Recombinant Origin of Human Immunodeficiency Virus Type 1 Subtype E," <i>J. Virol.</i> 74(22):10752-10765 (2000)
	BF	Andre <i>et al.</i> , "Increased Immune Response Elicited by DNA Vaccination with a Synthetic gp 120 Sequence with Optimized Codon Usage," <i>J. Virol.</i> 74(2):1497-1503 (1990)
	BG	Avice <i>et al.</i> , "Phylogenetics and the origin of species," <i>Proc. Natl. Acad. Sci. USA</i> 94(15):7748-7755 (1997)
	BH	Barnett <i>et al.</i> , "Vaccination with HIV-1 gp120 DNA induces immune responses that are boosted by a recombinant gp120 protein subunit," <i>Vaccine</i> 15:869-873 (1997)
	BI	Barouch <i>et al.</i> , "Control of viremia and prevention of clinical AIDS in rhesus monkeys by cytokine-augmented DNA vaccination," <i>Science</i> 290:486-492 (2000)
	BJ	Beaumont, "Detecting Population Expansion and Decline Using Micro satellites," <i>Genetics</i> 153(4):2013-2029 (1999)
	BK	Beddows <i>et al.</i> , "Comparison of the Antibody Repertoire Generated in Healthy Volunteers following Immunizations with a Monomeric Recombinant gp 120 Construct Derived from a CCR5/CXCR4-Using Human Immunodeficiency Virus Type 1 Isolate with Sera from Naturally Infected Individuals," <i>J. Virol.</i> 73(2):1740-1745 (1999)
	BL	Beerli <i>et al.</i> , "Maximum-Likelihood Estimation of Migration Rates and Effective Population Numbers in Two Populations Using a Coalescent Approach," <i>Genetics</i> 152(2):763-773 (1999)
	BM	Brandt <i>et al.</i> , "Association of chemokine-mediated block to HIV entry with coreceptor internalization," <i>J. Biol. Chem.</i> 277:17291-17299 (2002)
	BN	Buonaguro <i>et al.</i> , "Heteroduplex Mobility Assay and Phylogenetic Analysis of V3 Region Sequences of Human Immunodeficiency Virus Type 1 Isolates from Gulu, Northern Uganda," <i>J. Virol.</i> 69(12):7971-7981 (1995)
	BO	Burton <i>et al.</i> , "Why do we not have an HIV vaccine and how can we make one?," <i>Nat Med Vaccine Suppl.</i> 4(5):495-498 (1998)
	BP	Cecilia <i>et al.</i> , "Neutralization Profiles of Primary Human Immunodeficiency Virus Type 1 Isolates in the Context of the Coreceptor Usage," <i>J. Virol.</i> 72(9):6988-6996 (1998)

Examiner Signature	Date Considered
EXAMINER: Initials citation considered. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.	

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	BQ	Chackerian <i>et al.</i> , "Human Immunodeficiency Virus Type 1 Coreceptors Participate in Postentry Stages in the Virus Replication Cycle and Function in Simian Immunodeficiency Virus Infection," <i>J. Virol.</i> 71:3932-3939 (1997)
	BR	Cornelissen <i>et al.</i> , "pol Gene Diversity of Five Human Immunodeficiency Virus Type 1 Subtypes: Evidence for Naturally Occurring Mutations that Contribute to Drug Resistance, Limited Recombination Patterns, and Common Ancestry for Subtypes B and D," <i>J. Virol.</i> 71(9):6348-6358 (1997)
	BS	Crandall <i>et al.</i> , "Empirical Tests of Some Predictions from Coalescent Theory With Applications to Intraspecific Phylogeny Reconstruction," <i>Genetics</i> 134(3):959-969 (1993)
	BT	Database Accession No. AX028621, Sequence 71 from WO 00/29561 (05/25/2000)
	BU	Doria-Rose <i>et al.</i> , "Human Immunodeficiency Type 1 Subtype B Ancestral Envelope Protein Is Functional and Elicits Neutralizing Antibodies in Rabbits Similar to Those Elicited by a Circulating Subtype B Envelope," <i>J. Virol.</i> 77:11563-11577 (2003)
	BV	Edmonson <i>et al.</i> , "Evolution of a Simian Immunodeficiency Virus Pathogen," <i>J. Virol.</i> 72:405-414 (1998)
	BW	Edwards <i>et al.</i> , "Phylogenetically Informative Length Polymorphism and Sequence Variability in Mitochondrial DNA of Australian Songbirds ( <i>Pomatostomus</i> )," <i>Genetics</i> 126(3):695-711 (1990)
	BX	Feng <i>et al.</i> , "Progressive sequence alignment as a prerequisite to correct phylogenetic trees," <i>J. Mol. Evol.</i> 35:351-360 (1987)
	BY	Fu, "Estimating Effective Population Size or Mutation Rate Using the Frequencies of Mutations of Various Classes in a Sample of DNA Sequences," <i>Genetics</i> 138(4):1375-1386 (1994)
	CA	Gao <i>et al.</i> , "A Comprehensive Panel of Near-Full Length Clones and Reference Sequences for Non-subtype B Isolates of Human Immunodeficiency Virus Type 1," <i>J. Virol.</i> 72(7):5690-5698 (1998)
	CB	Gao <i>et al.</i> , "HIV-1 clone 92us657.1 from Chicago (USA), tat protein, rev protein, envelope glycoprotein (env) genes, complete cds and vpr protein and nef protein genes, partial cds," retrieved from EBI Database Accession No. U04908 (July 19, 1996)
	CC	Gao <i>et al.</i> , "HIV-1 isolate 714 clone 1 from Baltimore, MD, USA, envelope glycoprotein (env) gene, partial cds," retrieved from EBI Database Accession No. U08450 (May 9, 1994)
	CD	Gao <i>et al.</i> , "HIV-1 isolate 959 clone 18 from Malawi, envelope glycoprotein (env) gene, partial cds," retrieved from EBI Database Accession No. U08453 (May 9, 1994)
	BZ	Gao <i>et al.</i> , "Molecular Cloning and Analysis of Functional Envelope Genes from Human Immunodeficiency Virus Type 1 Sequence Subtypes A through G. The WHO and NIAD Networks for HIV Isolation and Characterization," <i>J. Virol.</i> 70(3):1651-1667 (1996)
	CE	Gao <i>et al.</i> , "Envelope glycoprotein, human immunodeficiency virus 1," retrieved from EBI Database Accession No. Q74749 (Nov. 1, 1996)
	CF	Gao <i>et al.</i> , "Envelope glycoprotein, human immunodeficiency virus," retrieved from EBI Database Accession No. Q70010 (Nov. 1, 1996)
	CG	Gao <i>et al.</i> , "Origin of HIV-1 in the chimpanzee <i>Pan troglodytes troglodytes</i> ," <i>Nature</i> 397(6718):436-441 (1999)
	BAA	Gao <i>et al.</i> , "The Heterosexual Human Immunodeficiency Virus Type 1 Epidemic in Thailand is Caused by an Intersubtype (A/E) Recombinant of African Origin," <i>J. Virol.</i> 70(10):7013-7029 (1996)

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	CH	Gillespie, "Genetic Drift in an Infinite Population: The Pseudo hitchhiking Model," <i>Genetics</i> 155(2):909-919 (2000)
	CI	Goddard <i>et al.</i> , "Recurrent invasion and extinction of a selfish gene," <i>Proc. Natl. Acad. Sci. USA</i> 96(24):13880-13885 (1999)
	CJ	Graham <i>et al.</i> , "A Coalescent Model of Ancestry for a Rare Allele," <i>Genetics</i> 156(1):375-384 (2000)
	CK	Gupta <i>et al.</i> , "Adjuvants--a balance between toxicity and adjuvanticity," <i>Vaccine</i> 11:293-306 (1993)
	CL	Henikoff <i>et al.</i> , "Amino acid substitution matrices from protein blocks," <i>Proc. Natl. Acad. Sci. USA</i> 89:10915-10919 (1992)
	CM	Higgins <i>et al.</i> , "CLUSTAL: a package for performing multiple sequence alignment on a microcomputer," <i>Gene</i> 73:237-244 (1988)
	CN	Higgins <i>et al.</i> , "Fast and sensitive multiple sequence alignments on a microcomputer," <i>Comput. Appl. Biosci.</i> 5:151-153 (1989)
	CO	Itescu <i>et al.</i> , "Human immunodeficiency virus type 1 strains in the lungs of infected individuals evolve independently from those in peripheral blood and are highly conserved in the C-terminal region of the envelope V3 loop," <i>Proc. Natl. Acad. Sci. USA</i> 91(24):11378-11382 (1994)
	CP	Karlin <i>et al.</i> , "Applications and statistics for multiple high-scoring segments in molecular sequence," <i>Proc. Natl. Acad. Sci. USA</i> 90:5873-5887 (1993)
	CQ	Kelly, "An application of population genetic theory to synonymous gene sequence evolution in the human immunodeficiency virus (HIV)," <i>Gen. Res.</i> 64:1-9 (1994)
	CR	Kimpton <i>et al.</i> , "Detection of Replication-Competent and Pseudotyped Human Immunodeficiency Virus with a Sensitive Cell Line on the Basis of Activation of an Integrated $\beta$ -Galactosidase Gene," <i>J. Virol.</i> 66: 2232-2239 (1992)
	CS	Korber <i>et al.</i> , "Limitations of a Molecular Clock Applied to Considerations of the Origin of HIV-1," <i>Science</i> 280(5371):1868-1871 (1998)
	CT	Kornfeld <i>et al.</i> , "Cloning of HTLV-4 and its relation to simian and human immunodeficiency viruses" <i>Nature</i> 326:610-613 (1987)
	CU	Kuiken <i>et al.</i> , "Increasing antigenic and genetic diversity of the V3 variable domain of the human immunodeficiency virus envelope protein in the course of the AIDS epidemic," <i>Proc. Natl. Acad. Sci. USA</i> 90(19):9061-9065 (1993)
	CV	Kuiken <i>et al.</i> , "HIV Sequence Compendium, Part II. HIV-1/SIVcpz Complete Genomes" 279-466 (2001)

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